

7-channel Darlington transistor array

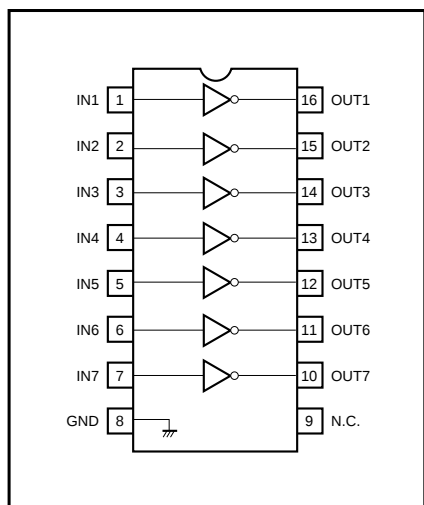
BA6250 / BA6250F / BA6251 / BA6251F

The BA6250, BA6250F, BA6251, and BA6251F are 7-channel transistor arrays particularly suitable for interfaces between a microcomputer in a VCR and the various ICs, or between one IC and another, and for low current drives such as LEDs.

●Features

- 1) High withstanding output voltage of 30V (max.).
- 2) Output current of 20mA max. ($V_{IN} \geq 3V$).

●Block diagram



●Internal circuit configuration

BA6250 / BA6250F

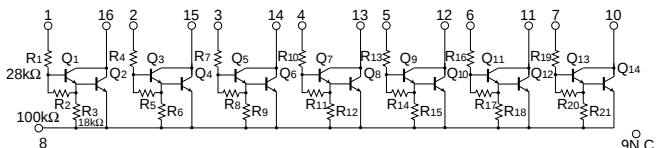


Fig.1

BA6251 / BA6251F

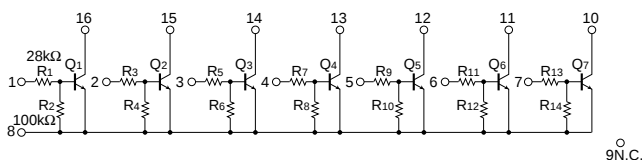


Fig.2

●Absolute maximum ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Limits	Unit
Power supply voltage	V_{CEO}	30	V
Power dissipation	P_d	500*	mW
Operating temperature	T_{opr}	$-25 \sim +75$	$^\circ\text{C}$
Storage temperature	T_{stg}	$-55 \sim +125$	$^\circ\text{C}$
Input voltage	V_{IN}	30	V
Output current	$I_O \text{ Max.}$	30	mA

* Reduced by 5mW for each increase in T_a of 1°C over 25°C .

●Electrical characteristics (unless otherwise noted, Ta = 25°C, V_{CC} = 12V)

Parameter	Symbol	Type	Min.	Typ.	Max.	Unit	Conditions	Measurement circuit
Output power supply voltage range	V _O	BA6250 / BA6250F	—	12	28	V	—	Fig. 3
		BA6251 / BA6251F	—	12	28		—	
Input high level voltage	V _{IH}	BA6250 / BA6250F	3	—	—	V	I _{OUT} = 20mA	Fig. 3
		BA6251 / BA6251F	2	—	—		I _{OUT} ≥ 1mA	
Input low level voltage	V _{IL}	BA6250 / BA6250F	—	—	0.6	V	I _{OUT} ≤ 10μA	Fig. 4
		BA6251 / BA6251F	—	—	0.3		I _{OUT} ≤ 10μA	
Output voltage	V _{OUT}	BA6250 / BA6250F	—	—	1.4	V	I _{OUT} = 20mA, V _{IN} = 12V	Fig. 3
Output saturation voltage	V _{CE (sat)}	BA6251 / BA6251F	—	0.3	—		I _{OUT} = 10mA, V _{IN} = 12V	
Output current	I _{OUT}	BA6250 / BA6250F	—	—	20	mA	V _{IN} ≥ 3V	Fig. 3
		BA6251 / BA6251F	—	—	20		V _{IN} ≥ 12V	
Input current	I _{IN}	BA6250 / BA6250F	—	—	0.6	mA	I _{OUT} = 10mA, V _{IN} = 12V	Fig. 3
		BA6251 / BA6251F	—	—	0.6		I _{OUT} = 10mA, V _{IN} = 12V	
Output leakage current	I _L	BA6250 / BA6250F	—	—	1	μA	V _{CC} = 28V, V _{IN} = 0V	—

●Measurement circuits

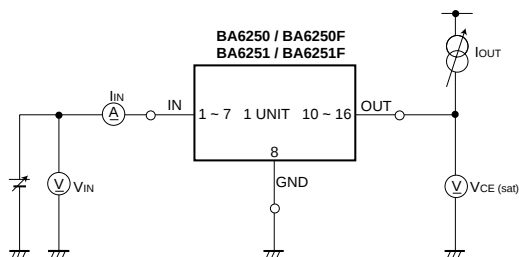


Fig.3

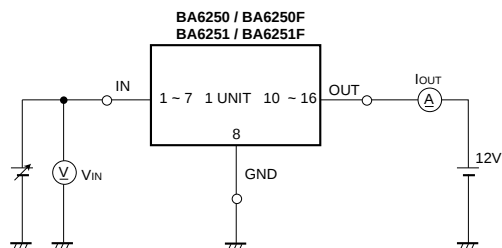


Fig.4

●External dimensions (Units: mm)

